



Sun Stream - the "leading edge" Vacuum Solar Collectors for □ the domestic and commercial markets designed specifically for Europe. □

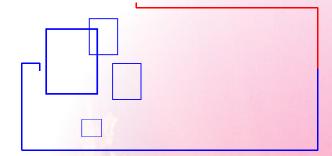


We design, install and commission state of the art, solar energy collectors to provide hot water for all types of applications. □

Whatever the application, we can provide a cost effective, environmental solution

The "Sun Stream" range of collectors can provide approximatly 70% of the hot water requirements over the course of a year; they can be sized to provide greater quantities of hot water depending upon client requirements, at the same time reducing C02 emissions by over 2 tons per year in the smallest systems

The Domestic collectors have been designed for easy installation and typically take only one day to install. It can be either DIY or carried out by a qualified plumber.







Sunrain produces from its state of the art manufacturing site covering over 80000 m² the internationally advanced "M-ALN three-cylinder-cathodes DC magnetron sputter-□ ing technology" solar vacuum tube, which is co-developed by the New Energy Centre of Peking University and Sunrain.□

Sunrain produces a full range of systems both for domestic and commercial applications and has over the years installed over 100,000 systems, included amongst its clients are government and local authority bodies plus many of the worlds largest corporations.

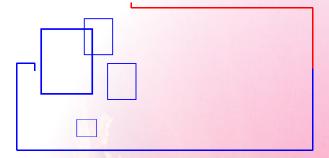
The company and its products have achieved many international accreditations and honours. □









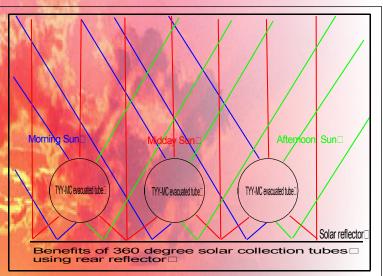




Solar Evacuated Tubes

We offer the very latest in Solar Heating technology. The 360 degree collection capabilities of the Series TYY-MC evacuated tube maximises solar radiation collection no matter what time of day. The reflector plate mounted behind the tubes □ reflects the suns energy that would normally be lost which heats the back of the tube □

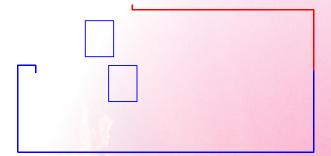






A range of collectors are available with evacuated tubes in 58mm diameter, in either 1.5m or 1.8m lengths.
Collectors use heat pipe energy transfer, for ease of installation and tube replace—ment in the event of damage.







Collectors:-Northern European

In northern Europe the requirement for roof mounted solar panels coupled to remote hot water tanks is met by our range of Sun Stream Collectors. □

Both the mounting frame and manifolds are made from stainless steel and are designed to cope with the weather conditions in this region. □

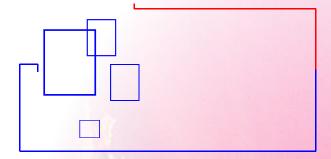
The collectors come in three sizes and can be coupled together to obtain the correct size to meet your requirements.



Collector Model	Nett absorber area sq metre	Solar Tank size (Ltr)		
SS5815/15□	1.65□	110□		
SS5815/20□	2.2□	150□		
SS5815/25□	2.75□	190□		
SS5818/15□	1.98□	130□		
SS5818/20 🗆	2.64□	180□		
SS5818/25□	3.3□	230□		

Above collectors are based on a 58mm x 1500mm or ☐ 1800mm evacuated tube with heat pipe. ☐

Additional performance using a reflector is not included in the nett absorber



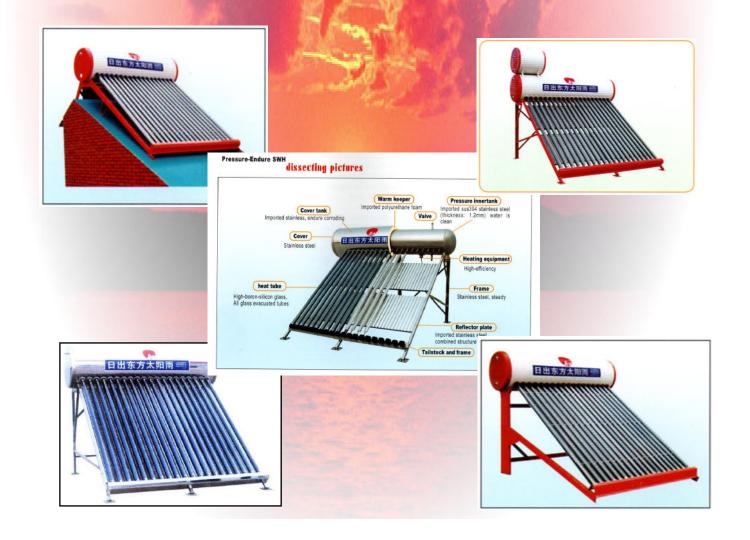


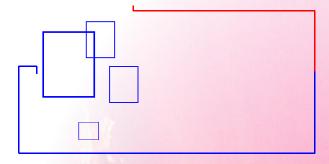
A range of quality solar collectors for the Southern European market

All the water tanks are made from stainless steel. Automated welding equipment is used to maintain the quality and integrity of all the systems. □

The Polyurethane foam is injected between the solar tank and the outer casing to minimise any heat loss.

The frame is also constructed from stainless steel and comes in a variety of models







Technical Specification for the Sun Stream Collectors

Vacuum Tubes Data

The Sun Stream vacuum collectors uses the rotary three-targets magnetron sputtering technology developed in conjunction with the New Energy Centre of Peking Uni-tyresity.

The advantage of this technology is improved thermal efficiency, lower emittance rate and a working efficiency in high temperatures of over 300C□

High quality borosilicate glass is used throughout.

Sun Stream technical information

Absorption	0.94-0.96		
Emittance	0.04□		
Stagnation Temperature	300 ^d C		
Solar radiance exposure	2.46MJ/m ²		
Average heat loss co-efficient	0.60W/m ² *C□		
Vacuum	3* 10년 Pa□		





Manifold and Frame

The manifold and frame are made of high grade stainless steel, to provide an extended long life.

The reflector plates are produced from aluminium.

The insulation within the manifold is high grade polyurethane foam.

The copper tube (male) in and out is $\frac{3}{4}$ " BSP

Heat pipe technology is used throughout to ensure ease and speed of installation whilst ensuring high efficiency of the system.

Product Code	Number of Tubes	Tube Length Metres	External Dimensions (mm)	Gross Weight (kg's)	Absorber Area sq metres	Recommended Tank Size litres
SS5815/15	15	1.5	1700*1345*168	61	1.65	110
553813/13	13	1.3	1/00*1343*108	01	1.65	110
SS5815/20	20	1.5	1700*1760*168	79.5	2.2	150
SS5815/25	25	1.5	1700*2175*168	99.5	2.75	190
SS5818/15	15	1.8	2000*1345*168	68	1.98	130
SS5818/20	20	1.8	2000*1760*168	88.5	2.64	180
SS5818/25	25	1.8	2000*2175*168	110.5	3.3	230